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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NESTOR REKALDE ARRIETA, JOSEBA ROMATET, and JULIAN ARRILLAGA

Appeal 2009-006139
Application 10/562,430
Technology Center 3600

Decided: October 29, 2009

Before: JENNIFER D. BAHR, STEFAN STAICOVICI, and KEN B. BARRETT, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Nestor Rekalde Arrieta, et al. (Appellants) appeal under 35 U.S.C. § 134 (2002) from the Examiner's decision rejecting claims 17-31. Claims 1-16 have been canceled. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

The Invention

Appellants' claimed invention is directed to a constant velocity universal joint assembly. The joint has an outer part 12 made of a joint bell 16, a radial supporting face 18, and a connecting journal 17. Spec. 4:11-17, fig. 1. A wheel hub 25 is slid onto the connecting journal 17, and is clamped to the outer joint part 12 by threading such that the wheel hub 25 is supported on the radial supporting face 18 by an annular disc 22 made of low-friction material. Spec. 4:27 to 5:7, fig. 2.

Claim 17, reproduced below, is illustrative of the claimed invention.

> 17. A constant velocity universal joint assembly comprising:
>
> a constant velocity universal joint with an outer joint part in the form of a joint bell with an attached connecting journal and a radial supporting face at the joint bell at the base of the connecting journal;
>
> a wheel hub which is slid on to the connecting journal and which, via threading, is clamped to the outer joint part, wherein the wheel hub is directly or indirectly supported on the supporting face; and
>
> an annular disc made of a low-fiction material, which is positioned directly on the supporting face so as to be concentric relative to

the connecting journal and which accommodates the clamping forces of the threading.

The Rejection

Appellants seek review of the Examiner's rejection under 35 U.S.C. § 103(a) of claims 17-31 as unpatentable over US Patent 6,135,571 to Mizukoshi (issued Oct. 24, 2000) and US Patent 2,713,504 to Coleman (issued Jul. 19, 1955).[1]

SUMMARY OF DECISION

We AFFIRM.

ISSUES

The Examiner rejected claims 17-31 under § 103(a) with a proposed modification of the annular support disc in Mizukoshi's constant velocity universal joint with the bronze or plastic annular support disc in Coleman's fluid-tight joint. Ans. 3-4. With respect to claim 17, Appellants argue that the Examiner has failed to address certain limitations with respect to the wheel hub and annular disc, and that the Examiner has used non-analogous art in making the rejection. Appeal Br. 6-8. With respect to claims 18-25, Appellants point out additional claim limitations, but provide no arguments attempting to show error in the Examiner's findings or conclusions[2]. Appeal

[1] The Examiner withdrew the rejection of claims 17-25 and 29-31 under 35 U.S.C. § 102(b). Ans. 3.

[2] *Ex parte Belinne*, 2009-004693, slip op. at 7-8 (BPAI Aug. 10, 2009) (designated as an "Informative Opinion"), http://www.uspto.gov/web/offices/dcom/bpai/its/fd09004693.pdf (last visited Sept. 2, 2009) ("Weighing as a whole the Appellants' arguments,

Br. 9-10. Finally, with respect to claims 26-31, Appellants state that the claims stand or fall with the claims from which they depend. Appeal Br. 10. Therefore, claims 18-31 stand or fall with representative claim 17. 37 C.F.R. § 41.37 (c)(l)(vii) (2007). The dispositive issues presented in this appeal are:

(1) Have Appellants demonstrated that the Examiner erred in concluding that Mizukoshi and Coleman, in combination, render obvious a wheel hub clamped, via threading, to an outer joint part, wherein the wheel hub is also supported on the supporting face of the outer joint part? Appeal Br. 6-7.

(2) Have Appellants demonstrated that the Examiner erred in concluding that Mizukoshi and Coleman, in combination, render obvious an annular disc positioned on the supporting face of the outer joint part that accommodates the clamping forces of the threading? Appeal Br. 7-8.

(3) Have Appellants demonstrated that Coleman, describing particular materials suited for use in fluid-tight joints, is non-analogous prior art? Appeal Br. 8.

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which are not supported by further explanation, that the elements are missing and the Examiner's specific and detailed findings, we reach a conclusion that Appellants have not shown error in the Examiner's [rejection of the claims]."). "A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim." 37 C.F.R. § 41.37(c)(1)(vii) (2007).

FACTS PERTINENT TO THE ISSUES

(FINDINGS-OF-FACT (FF))

FF1 The Examiner correctly found that Mizukoshi describes a constant velocity universal joint made of an outer joint part (housing 11) with joint bell, the outer joint part 11 having a radial supporting face (adjacent to item 46) at the base of an attached connecting journal (drive shaft 29) having splined shaft 30. Ans. 3; *see also* Mizukoshi, fig. 8.

FF2 The Examiner found that Mizukoshi describes a wheel hub 6a slid onto a connecting journal 29 and then clamped to the outer joint part by threading 141 and 142. Ans. 3-4. In particular, wheel hub 6a with splined bore 28 is slid onto the splined shaft 30 of connecting journal 29 of the outer joint part 11 and fastened by bolt 142, which is screwed into threaded hole 141 of the splined shaft 30. Mizukoshi, col. 35, ll. 35-46, fig. 35.

FF3 The Examiner found that Mizukoshi describes that the wheel hub 6a is directly or indirectly supported on the supporting face of the outer joint part 11. Ans. 4. In particular, the hub 6a is bolted to the outer joint part 11 (FF2), thus urging the hub 6a against the annular plate 49 (FF5), which in turn presses against the supporting face of the outer joint part 11 (FF4). As such, outer joint part 11 supports hub 6a through annular plate 49.

FF4 The Examiner found that Mizukoshi describes an annular ring (metal backing member 69) positioned directly on the supporting face of the outer joint housing 11. Ans. 4. In particular, annular resilient plate 49 is attached to the ring-shaped portion 46 of metal backing member 69

and acts as a seal (under compression) between flange 27 of hub 6a and the supporting face of outer joint housing 11, and also acts as a support to prevent the hub 6a from moving toward the outer joint housing 11. Mizukoshi, fig. 8, col. 18, ll. 39-51.

FF5 The Examiner found that Mizukoshi describes that annular ring 69 (and thus, annular plate 49) accommodates the clamping forces of the threading 141 and 142. Ans. 4. In particular, annular plate 49 is under compression between the supporting face of the outer joint part 11 and flange 27 of the wheel hub 6a (FF4), the compression coming from the threaded bolt 142 (*see* FF2), which is the only component in Mizukoshi that pushes hub 6a against outer joint part 11.

FF6 The Examiner ostensibly found that Mizukoshi does not explicitly describe an annular ring made out of bronze or plastic. Ans. 4; *cf.* n.3, *infra*, noting that claim 17 does not require a ring made of bronze or plastic.

FF7 The Examiner found that Coleman describes that an annular disc made from bronze or plastic is an art recognized equivalent to an annular disc made from steel. Ans. 4; *see* Coleman, col. 5, ll. 18-23. Appellants do not challenge the Examiner's finding.

FF8 Both Coleman and Mizukoshi are in the field of rotating joints. *See* Coleman, col. 3, ll. 8-12, noting the device is a joint between a shaft and a collar; Mizukoshi, col. 1, ll. 5-16, noting the device is a constant velocity joint used to connect an axle and a wheel in a vehicle.

FF9 Both Coleman and Mizukoshi address a problem known in the art, stemming from fluid tightness of the joint. *See* Coleman, col. 5, ll. 18-27, "[t]he material of the … annular ring will be chosen to suit the

fluid"; Mizukoshi, col. 19, ll. 10-19, discussing that a benefit of the seal formed by annular plate 49 is that "foreign matter such as rain water can be securely prevented."

PRINCIPLES OF LAW

> A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem. In other words, familiar items may have obvious uses beyond their primary purposes.

In re ICON Health and Fitness, Inc., 496 F.3d 1374, 1379-80 (Fed. Cir. 2007) (citations and internal quotations omitted). Moreover, in making a determination with regard to obviousness, the inquiry is not limited to looking only at the problem Appellant was trying to solve. The question is not whether the combination was obvious to Appellant but whether it was obvious to a person of ordinary skill in the art. Thus, "[u]nder the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007).

ANALYSIS

The Examiner's Rejection

In rejecting claim 17, the Examiner found that Mizukoshi describes a constant velocity universal joint made of an outer joint part with a joint bell,

attached connecting journal, and a radial supporting face at the base of the journal. FF1. Further, the Examiner found that Mizukoshi describes a wheel hub slid onto the connecting journal, clamped to the outer joint part by threading (FF2), and supported on the supporting face of the outer joint (FF3), the supporting face having an annular ring (FF4) that accommodates the clamping forces of the threading (FF5). Ans. 3-4. The Examiner ostensibly found that Mizukoshi does not describe that the annular ring is made from bronze or plastic[3]. FF6. However, the Examiner found that Coleman describes an annular ring made from bronze or plastic. FF7. Therefore, the Examiner concluded that it would have been obvious to modify the joint having an annular ring in Mizukoshi with the bronze or plastic annular ring described in Coleman because such materials were art-recognized equivalents. Ans. 4.

Issue (1) - Wheel Hub

Appellants first argue that the Examiner has failed to show a wheel hub clamped to the outer joint by threading. Appeal Br. 6-7. However, Mizukoshi describes a tension bolt 142 threaded into connecting journal 29 (which is a part of outer joint part 11), which clamps the wheel hub 6a to the outer joint part 11. FF2. To the extent that Appellants may be arguing that the threading 141, 142 is not shown in figures 8-13 cited by the Examiner in

[3] Claim 17 does not require a bronze or plastic annular disc, which are instead limitations from claims 26-31. It is not clear what the Examiner's position is on whether Mizukoshi describes an annular disc made of "low-friction material." However, this issue is not before us.

showing other claim features, Mizukoshi describes that the thread-based clamping of figure 35 may be used with the annular plate 49 of figure 8[4].

Appellants further argue that Mizukoshi lacks a wheel hub supported directly or indirectly on the supporting face of the outer joint part. Appeal Br. 7. Appellants point to an "annular gap between the outer joint part 11 and the hub 6a," and argue that Mizukoshi lacks a wheel hub supported "either directly by an annular beading or indirectly over an inner bearing race." *Id.* However, the claim merely requires that the wheel hub is directly or indirectly supported on the supporting face, such that the presence or absence of a "gap" is not determinative. It is well established that limitations not appearing in the claims cannot be relied upon for patentability. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982).

The wheel hub 6a is supported on the supporting face of the outer joint part 11. Mizukoshi describes that the annular plate 49 is positioned directly on the supporting face of the outer joint part 11, such that when the wheel hub 6a presses against the annular plate 49, annular plate 49 in turn presses against the supporting face. As such, the supporting face supports the hub 6a. FF3.

[4] Figure 35 is substantially the same as figure 7. *See* col. 35, ll. 62-65, noting that figure 35 is similar to figure 34; col. 35, ll. 30-34, noting that figure 34 is similar to figure 7. Further, at col. 18, ll. 52-57, Mizukoshi describes that the annular ring 69 and associated structure (45, 46, 49) described in figure 8 can be substituted for the o-ring 42 in figure 7 (and therefore in figure 35).

Issue (2) - Annular Disc

Appellants argue that Mizukoshi does not describe an annular disc that accommodates the clamping forces of the threading. Appeal Br. 7-8. However, Mizukoshi describes an annular disc 49 that acts as a seal, under compressive forces between the wheel hub 6a and the outer joint part 11. FF4. Further, the wheel hub 6a is attached to the outer joint part 11 by threaded bolt 142. FF2. Therefore, it is the threaded bolt 142 that provides the compressive forces on the annular disc 49, such that the annular disc 49 accommodates the clamping forces of the threading by compressing. FF5.

Issue (3) - The Coleman Reference

Appellants argue that Coleman is not analogous art because Coleman's fluid tight joints "bear no relationship with the claimed outer joint part being connected to a wheel hub," and that therefore one of ordinary skill in the art "would not be compelled to take Coleman into account when looking for a solution to the object of the claimed invention." Appeal Br. 8. However, one of ordinary skill is not bound to seek a solution only to the problem faced by Appellants, but may seek a solution to any problem known in the relevant field of endeavor. *KSR*, 550 U.S. at 420. Both Coleman and Mizukoshi are in the field of rotational joints (FF8), and both share a concern with problems stemming from fluid tightness of the joint (FF9). Therefore, Coleman's discussion about the material used for keeping a fluid-tight seal is clearly relevant to one of ordinary skill in the art considering the fluid-tight seal of Mizukoshi.

CONCLUSIONS

With respect to representative claim 17:

(1) Appellants have not demonstrated that the Examiner erred in concluding that Mizukoshi and Coleman, in combination, render obvious a wheel hub clamped, via threading, to an outer joint part, wherein the hub is also supported on the supporting face of the outer joint part.

(2) Appellants have not demonstrated that the Examiner erred in concluding that Mizukoshi and Coleman, in combination, render obvious an annular disc positioned on the supporting face of the outer joint part that accommodates the clamping forces of the threading.

(3) Appellants have not demonstrated that Coleman, describing fluid-tight joints, is non-analogous prior art.

Likewise, Appellants have failed to demonstrate error in the Examiner's rejection of claims 18-31, which stand or fall with claim 17.

DECISION

The Examiner's decision is affirmed as to claims 17-31.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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